

ABSTRACT

A phosphorescent phosphor having excellent afterglow luminance characteristics, even under low illumination intensity of radiation conditions, compared to conventional strontium aluminate phosphorescent phosphors of the same type, and particularly a phosphorescent phosphor having excellent initial afterglow luminance characteristics and excellent afterglow luminance characteristics at 60 and 90 minutes after cessation of the excitation, with following requirements:

$$0.015 < \text{Eu} / (\text{Sr} + \text{Ba} + \text{Eu} + \text{Dy}) \leq 0.05, \quad 0.3 \leq \text{Dy} / \text{Eu} \leq 2,$$

$$0.03 \leq \text{Ba} / (\text{Sr} + \text{Ba}) \leq 0.2 \quad \text{and} \quad 2.1 \leq \text{Al} / (\text{Sr} + \text{Ba} + \text{Eu} + \text{Dy}) \leq 2.9.$$